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Patent

OTPE Atty. Dkt. No.: 124263-1019 UTA No. 013-03 CIP

SEP 1 3 2004

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application. No.

10/822,345

First Named Inventor:

Meng Tao

Filed

April 12, 2004

Title

11pm 12, 2001

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IMPROVEMENTS FOR SEMICONDUCTOR INTERFACES

Art Unit

2813

Examiner

Not Yet Assigned

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## INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to the provisions of 37 C.F.R. § 1.97, Applicants hereby make of record the references set forth in the attached form PTO/SB/08B. No inference should be made that the cited references are in fact material, are in fact prior art, or that no better art exists. The cited references are listed in numerical order and not in any order based on their pertinence.

It is requested that the Examiner fully consider the cited references and that they be cited on the front of any patent issuing from this application.

Copies of the cited references are attached.

An early action on the merits is respectfully requested.

Respectfully submitted,

Date:

Sept 8, 2004

Gardere Wynne Sewell LLP 1601 Elm Street, Suite 3000 Dallas, Texas 75201-4761 214-999-4052 Monique A. Vander Molen

Registration No. 53,716

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of

Complete if Known				
Application Number	10/822,345			
Filing Date	April 12, 2004			
First Named Inventor	Meng Tao			
Group Art Unit	2812			
Examiner Name	Not Yet Assigned			
Attorney Docket Number	124263-1019			

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>		
		R.M. TROMP, R.J. HAMERS, and J.E. DEMUTH, Si(001) dimmer structure observed with scanning tunneling microscopy, Phys. Rev. Lett., 1985, 1303, 55			
		E. KAXIRAS, Semiconductor-surface restoration by valence-mending absorbates: Application to Si(100):S and Si(100):Se, Physical Review B, 1991, 6324, 43			
		H. METZNER, TH. HALN, and JH. BREMER, Structure of sulfur-terminated silicon surfaces, Surf. Sci., 1997, 377-371-374, 379,			
		J.J. BOLAND, Structure of the H-saturated Si(100) surface, Phys. Rev. Lett., 1990, 3325, 65			
		M. TAO and L.P. HUNT, The thermodynamic behavior of the Si-H system and its role in Si-CVD from SiH <sub>4</sub> , J. Electrochem. Soc., 1992, 806, 139			
		J.E. NORTHRUP, Structure of Si(100)H: Dependence on the H chemical potential, Phys. Rev. B, 1991, 1419, 44			
		B.S. MEYERSON, F.J. HIMPSEL, and K. J. URAM, Bistable conditions for low-temperature silicon epitaxy, Appl. Phys. Lett., 1990, 1034, 57			
		J.W. LYDING, TC SHEN, J.S. HUBACEK, J.R. TUCKER, and G.C. ABELN, Nanoscale patterning and oxidation of H-passivated Si(100)-2x1 surfaces with an ultrahigh vacuum scanning tunneling microscope, Appl. Phys. Lett., 1994, 2010, 64			
		TC SHEN, C. WANG, G.C. ABELN, J.R. TUCKER, J.W. LYDING, PH. AVOURIS, and R.E. WALKUP, Atomic-scale desorption through electronic and vibrational excitation mechanisms, Science, 1995, 1590, 268			
		J.W. LYDING, UHV STM nanofabrication: progress, technology spin-offs, and challenges, Proceedings of the IEEE, 1997, 589, 85			
		TC. SHEN, C. WANG, and J.R. TUCKER, Al nucleation on monohydride and bare Si (001) surfaces: atomic scale patterning, Phys. Rev. Lett., 1997, 1271, 78			

Examiner	Date
Signature	Considered

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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				Complete if Known		
Substi	Substitute for form 1449B/PTO			Application Number	10/822,345	
INE	INFORMATION DISCLOSURE			Filing Date	April 12, 2004	
STATEMENT BY APPLICANT				First Named Inventor	Meng Tao	
31	(use as many sheets as necessary)			Group Art Unit	2812	
				Examiner Name	Not Yet Assigned	
Sheet	2	of	2	Attorney Docket Number	124263-1019	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examir@ite Initials*No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>		
	I. LYUBINETSKY, Z. DOHNALEK, W.J. CHOYKE, and J.T. YATES, JR., Cl <sub>2</sub> dissociation on Si(100)-(2x1): A statistical study by scanning tunneling microscopy, Phys. Rev. B, 1998, 7950, 58			
	M. CHANDER, Y.Z. LI, D. RIOUX, and J.H. WEAVER, Patterning of Si(100): Spontaneous etching with Br <sub>2</sub> , Phys. Rev. Lett., 1993, 4154, 71			
	The National Technology Roadmap for Semiconductors, Semiconductor Industry Association, 1997			
	A. M. COWLEY, S. M. SZE, Surface States and Barrier Height of Metal- Semiconductor Systems, J. Appl. Phys, 1965, 3212-3220, 36			
	J. P. LACHARME, N. BENAZZI, C. A. SEBENNE, Compositional and electronic properties of Si(001)2X1 upon diatomic sulfur interaction, Surf. Sci., 1999, 415-419, 433-435			
	A. C. PAPAGEORGOPOULOS, M. KAMARATOS, Adsorption and desorption of Se on Si(100)2X1: surface restoration, Surf. Sci., 1999, 415-419, 433-435			
	MICHAELSON, HERBERT B., The work function of the elements and its periodicity, J. Appl. Phys., 1977, 4729-33, 48			

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Signature	Considered

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